Outcomes:

The expected ESA outcomes of phase II build upon phase I research outputs and address both loose ends from phase I and new research areas. The aim is to complete development of SI innovations and support their delivery and adoption. A series of research questions need to be answered to ensure the achievement of the expected outcomes and will guide the implementation of the project. For greater harmonization across the AR regional projects the research questions also feed into higher research questions at program level. Below are examples of the research questions to be addressed by this project in phase II. In addition, there are questions that cut across all outcomes such as those related to gender and equity issues, capacity building, communication, nutrition, and monitoring and evaluation that the project will address in support of achieving the intended outcomes.

Research questions:

What are the optimum integrated crop livestock technologies that result in increased allocative efficiency on farms?

What factors drive market stakeholders’ interest and their engagement in development of technologies (SI) that meet their needs?

What are the collective action approaches that can be employed to enhance the adoption of SI technologies in a sustainable manner in order to facilitate the reliable supply of high quality produce to buyers?

Under what condition does adoption of crop and fodder diversification and postharvest-technologies lead to improved food and nutrition security and safety of farm households?

How do gender, formal and informal arrangements from HH and community levels influence sustainable and equitable access and use of land and water for production and how can we improve it?

Considering differing agroecologies and weather variability, what are the options for balancing natural resource use sustainably versus maximizing livelihoods from HH to community scale?

What are the associated constraints to and opportunities for adoption of SI technologies at farm typology and intra-household levels?

How can linkages and partnerships with the public, private and civil society initiatives be made more efficient to support and facilitate the registration, release and delivery of validated technology packages?

Which support tools do farmers (women, youth, men) need to make informed decisions about the risks and opportunities associated with validated technologies?

How can we track and monitor progress on uptake of validated technologies by women, youth, men over time among direct and indirect project beneficiaries?

How can we harness generated knowledge on scaling approaches to enhance learning, improve technology delivery mechanisms and foster better adoption?

**Gender – cross cutting**

What are the social institutions (written and unwritten rules), that permit or restrict women and men from benefitting equally from agricultural innovations?

What changes in rules do farmers and other stakeholders envisage to increase equitable access to benefits?

 What are the intervention approaches that can facilitate the transformation of rules in specific contexts?

(INCLUDE other cross-cutting questions).